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ABSTRACT OF THE DISCLOSURE

A method, system, and apparatus for increasing the robustness of the compression efficiency and communication protocol for communication between entities over bandwidth limited communication links. The present invention uses the request-reply nature of communication decompression update compression and protocols to Each communication entity will update its dictionaries. dictionary with a new message as soon as it is known that the other communication entity has access to the message. In one aspect of the present invention, an entity updates a dictionary updating the compression/decompression by dictionary with sent messages as soon as a reply arrives from the other entity, and by updating the dictionary with received messages immediately. In another aspect of the present invention, received messages are used to update an entity's decompression dictionary and sent messages are used to update an entity's compression dictionary.